

Technology Demonstration Unit (TDU)

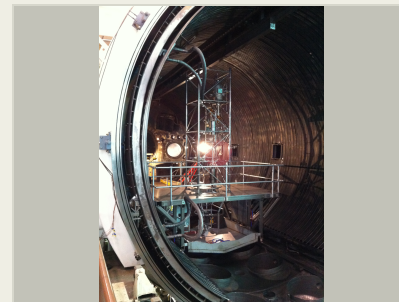
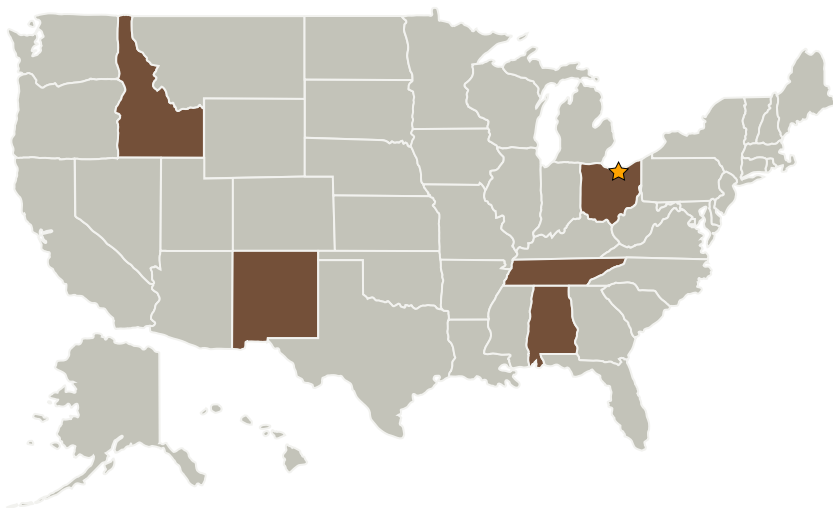
Completed Technology Project (2011 - 2015)



Project Introduction

Previous space reactor development programs (e.g. SP-100, Prometheus) have failed to complete the all-important system- level demonstration. The Nuclear Systems Project will demonstrate fission power subsystem technology readiness in a relevant environment for two classes of NASA's mission requirements: 10-100's kWe for exploration outposts and nuclear electric propulsion via the Technology Demonstration Unit (TDU), and 1-10 kWe for robotic science and small exploration systems (Kilopower).

Primary U.S. Work Locations and Key Partners



Fission Power System
Technology Demonstration Unit
in GRC Vacuum Facility 6.

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Organizations Performing Work	Role	Type	Location
★ Glenn Research Center(GRC)	Lead Organization	NASA Center	Cleveland, Ohio

Primary U.S. Work Locations	
Alabama	Idaho
New Mexico	Ohio
Tennessee	



Project Transitions

 **October 2011:** Project Start

 **December 2015:** Closed out

Images



TDU within Vacuum Facility 6 at GRC

Fission Power System Technology Demonstration Unit in GRC Vacuum Facility 6.
(<https://techport.nasa.gov/image/143225>)

Project Website:

<https://www.nasa.gov/directorates/spacetech/home/index.html>

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Glenn Research Center (GRC)

Responsible Program:

Game Changing Development

Project Management

Program Director:

Mary J Werkheiser

Program Manager:

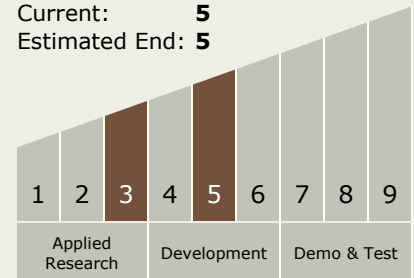
Gary F Meyering

Principal Investigator:

Donald T Palac

Technology Maturity (TRL)

Start: **3**
Current: **5**
Estimated End: **5**





Target Destination

Mars